

NEW ENGLAND NOTE

THE FIRST RECORD OF *POPULUS HETEROPHYLLA*
(SWAMP COTTONWOOD, SALICACEAE)
IN MASSACHUSETTS

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Populus heterophylla L. Massachusetts: Hampshire Co., South Hadley, on W side of Lithia Springs Rd., 0.4 km N of intersection with Elmer Brook, seasonally flooded wetland, 1 Sep 1999 and 13 Jun 2000, *Searcy s.n.* (MASS, NEBC).

While doing a survey of wetlands on the south side of the Holyoke Range, South Hadley, Massachusetts, we discovered a population of *Populus heterophylla*, swamp cottonwood. *Populus heterophylla* is a plant of the coastal plain province and is most common in the South Atlantic and Gulf regions (Godfrey 1988; Sargent 1896). It extends north up the Mississippi and becomes rare in Michigan and Ohio (Kartesz and Meacham 1999). It is also rare in the northeast, occurring as isolated populations in New Jersey, New York (Long Island), Connecticut, and Rhode Island (Kartesz and Meacham 1999). The population in South Hadley is the first location reported for the species in Massachusetts. Surveys of a large fraction of the swamps and vernal pools in the Holyoke Range have not turned up additional populations. The nearest populations of *P. heterophylla* are in Southington and Middletown, Connecticut (Graves et al. 1910), at least 50 miles to the south.

The population was growing within and along the margin of a seasonally flooded depression (probably a vernal pool) about 100 m long and 50 m wide within a larger wetland. The wetland is on Maybid silt loam, which is a deep, poorly drained soil found on old lake beds where the water table is close to the surface (Swenson 1981). The site is adjacent to a dirt road, has a few scattered cut stumps, and supports non-native invasive plants such as *Berberis thunbergii* DC. and *Rosa multiflora* Thunb. along the road margin. In addition, there is one indi-

vidual of *Catalpa speciosa* Warder, a species that naturalizes in wetlands in western Massachusetts (Burk and Prabhu 1988). However, most of the associated trees and shrubs are typical of the other vernal pools in the Holyoke Range and include *Acer rubrum* L., *Carpinus caroliniana* Walter, *Cephalanthus occidentalis* L., *Cornus amomum* Miller, *Fraxinus americana* L., *Ilex verticillata* (L.) A. Gray, *Lindera benzoin* (L.) Blume, *Nyssa sylvatica* Marshall, and *Quercus bicolor* Willd. This particular wetland also supports *Acer saccharinum* L., *Fraxinus pennsylvanica* Marshall, and *Quercus palustris* Muenchh., which are more typically floodplain species (Kearsley 1999), and some herbaceous species such as *Bidens discoidea* (Torr. & A. Gray) Britton, *Glyceria septentrionalis* A. Hitchc., and *Sium suave* Walter that are found only in a few other wetlands in the Holyoke Range.

The location in South Hadley appears to be typical of the habitat reported for the species. It is usually found along the borders of streams and swamps, and often in areas that are inundated year-round (Brown 1922; Sargent 1896). Although the South Hadley area with *Populus heterophylla* was dry in early September 1999, it was filled with water at least a meter deep several weeks later, and retained water throughout the summer of 2000. It is probably flooded most summers since other vernal pools in the area with a similar flora retain water most of the summer. Several of the populations of *P. heterophylla* in Connecticut also occur in swamps or along the Connecticut River, but there is one extant population in the state reported from a vernal pool near the summit of a traprock ridge (Mehrhoff 1989).

Populus heterophylla was one of the dominant trees at the South Hadley site and showed evidence of extensive vegetative growth. There were at least 24 stems of tree size (DBH > 10 cm), 77 stems in the sapling range (DBH 4–10 cm), and several hundred shoots with a diameter of 1 cm or less. The largest tree had a diameter at breast height (DBH) of 36 cm, which is about the size listed for mature trees of this species in New York (Brown 1922).

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